CLAIMS

1. A digital broadcasting system for transmitting and receiving, via a network, a broadcast stream created from a broadcast source that includes image and audio data and is used for broadcasting, said digital broadcasting system comprising:

a coding unit operable to code a broadcast source depending on a characteristic of the broadcast source and to generate a first layer code and a second layer code from the coded broadcast source, the first layer code and the second layer code, respectively, being able to be used for reproduction of the broadcast source;

a synthesizing unit operable to generate data bursts, each of which includes the generated first layer code and second layer code;

a multiplexing unit operable to create a broadcast stream by multiplexing the generated data bursts;

a transmitting unit operable to transmit the created broadcast stream to the network;

a receiving unit operable to receive the transmitted broadcast stream;

a decoding unit operable to extract, from the received broadcast stream, at least one of the first layer code and the second layer code; and

a reproducing unit operable to reproduce the broadcast source using the extracted code.

2. The digital broadcasting system according to Claim 1,

wherein the broadcast source includes content data for each of services,

said digital broadcasting system further comprises:

a clocking unit operable to keep time; and

a prediction window generating unit operable to generate a prediction window signal that indicates a time at which a target data burst to be received appears in the broadcast stream, the time being

specified by the clocking unit, and

said receiving unit is operable to receive only a data burst that corresponds to content data of one of the services, in the broadcast stream, only while the prediction window signal is in an active state.

3. The digital broadcasting system according to Claim 2,

wherein said receiving unit is further operable to control power supply for the reception of the data burst so that the power supply increases only while the prediction window signal is in the active state.

4. The digital broadcasting system according to Claim 2,

wherein said synthesizing unit is further operable to add burst time information into each data burst, the burst time information indicating a time at which a next data burst to be received appears in the broadcast stream, and

said prediction window generating unit is operable to determine a timing at which the prediction window signal turns into the active state and a window width of the prediction window signal, according to the burst time information added into the data burst.

5. The digital broadcasting system according to Claim 4,

wherein said receiving unit includes

a time-keeping unit operable to keep a reference time of said digital broadcast system, and

said time-keeping unit is operable to correct the reference time according to the burst time information.

6. The digital broadcast system according to Claim 2,

wherein said prediction window generating unit is further operable to expand a window width of the prediction window signal

by a predetermined length of time in the case where said receiving unit cannot receive a whole signal of the target data burst.

7. The digital broadcast system according to Claim 2,

wherein said synthesizing unit is further operable to add, to each data burst, at least one error correction code for correcting a code error which occurs when the broadcast stream is transmitted.

8. The digital broadcast system according to Claim 7,

wherein the error correction codes are added to the first layer code and the second layer code individually, and

a correction capability of the error correction code added to the second layer code is higher than a correction capability of the error correction code added to the first layer code.

9. A transmission apparatus for use in a digital broadcasting system for transmitting and receiving, via a network, a broadcast stream created from a broadcast source that includes image and audio data and is used for broadcasting, said transmission apparatus comprising:

a coding unit operable to code a broadcast source depending on a characteristic of the broadcast source and to generate a first layer code and a second layer code from the coded broadcast source, the first layer code and the second layer code, respectively, being able to be used for reproduction of the broadcast source;

a synthesizing unit operable to generate data bursts, each of which includes the generated first layer code and second layer code;

a multiplexing unit operable to create a broadcast stream by multiplexing the generated data bursts; and

a transmitting unit operable to transmit the formed broadcast stream to the network.

10. A reception apparatus for use in a digital broadcasting system for transmitting and receiving, via a network, a broadcast stream created from a broadcast source that includes image and audio data and is used for broadcasting, said reception apparatus comprising:

a receiving unit operable to receive a broadcast stream via the network;

a decoding unit operable to extract, from the received broadcast stream, at least one of a first layer code and a second layer code which are generated from the broadcast source that has been coded depending on a characteristic of the broadcast source, and which can respectively be used for reproduction of the broadcast source; and

a reproducing unit operable to reproduce the broadcast source using the extracted code.

11. A transmission and reception method for use in a digital broadcasting system for transmitting and receiving, via a network, a broadcast stream created from a broadcast source that includes image and audio data and is used for broadcasting, said transmission and reception method comprising:

coding a broadcast source depending on a characteristic of the broadcast source and generating a first layer code and a second layer code from the coded broadcast source, the first layer code and the second layer code, respectively, being able to be used for reproduction of the broadcast source;

generating data bursts, each of which includes the generated first layer code and second layer code;

creating a broadcast stream by multiplexing the generated data bursts;

transmitting the created broadcast stream to the network;

receiving the transmitted broadcast stream;

extracting, from the received broadcast stream, at least one

of the first layer code and the second layer code; and

reproducing the broadcast source using the extracted code.